

HEAD-MOUNTED DISPLAY AND OPTICAL ENGINE THEREOF

Abstract

A head-mounted display comprises monocular or binocular display chambers. Each display chamber is equipped with an optical engine that displays images. The mechanism of the optical engine is as follows: cast rays from a light source onto an LCoS device through a first polarizer, and an image is formed with rays, which reflect off the bottom of the LCoS device. The reflective rays penetrate the first polarizer and a film-coated beam splitter. With a concave mirror, the image is magnified and projected onto the surface of the beam splitter. Finally, the magnified image is formed in a viewer's eyeballs by means of the beam splitter.